

# CAREER CONNECTIONS

Career Connections serve to connect academic content and skills to real-world careers. Highlighting this connection allows students to find relevance in the academic content and provides an opportunity to discover personal interests, skills and aptitudes. This knowledge is the critical foundation for making well-informed decisions regarding future academic and career goals through development of the Individual Learning Plan (ILP).

## GOALS

These connections are designed to provide ideas that:

- Allow students to find relevance by connecting academic coursework to potential careers;
- Provide an opportunity for students to explore knowledge and skills related to a career interest;
- Generate ideas for other connections, tasks or problem-based learning projects;
- Reinforce the role of science, math, reading, writing, geography, history and technology; and
- Support the development of an Individual Learning Plan (ILP).

## USE

The following connections illustrate how content knowledge and/or skills are connected to careers. They are not standards, rather opportunities to highlight the knowledge, skills and aptitudes required in a variety of careers.

How these connections are made is an instructional decision for the classroom instructor, but may include a career-related scenario or task, video, guest speaker, student research, etc. They are intended to be modified to align with classroom content and learning outcomes.

After making a career connection, lead a class discussion to identify the content knowledge, skills, working conditions and educational requirements of a career. Ask students to identify related careers or career clusters that share content knowledge and/or skills.

## FURTHER CONNECTIONS

Use the organizer on Page 9 to help find career connections within your content area. These should be natural connections determined by you as the instructor or discovered by research for students in the upper middle grades.

## STUDENT REFLECTION

Provide an opportunity for students to consider their interest in the related careers. Use the grade-appropriate Student Reflection to guide conversation and reflection on the career.

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# CAREER CONNECTIONS

## PRIMARY CAREER CONNECTIONS

GRADE	ENGLISH LANGUAGE ARTS
<b>K</b>	During shared reading, select a text (such as <i>Welcome to Kindergarten: An Alphabet</i> by Violet Smith, or <i>Welcome to Kindergarten</i> by Anne Rockwell) that focuses on the various jobs within a school (such as teacher, principal, custodian, IT coordinator or technician, librarian). Students identify jobs in the book and make comparisons among illustrations within the book, such as type of tools or resources used, working alone or in a group and skills involved. Guide students through a tour of the school building, identifying the different settings in which staff work, such as school office, cafeteria or supply room.
<b>1</b>	During shared reading, select a text with an alphabet theme that highlights different skills used across many careers (such as <i>My Teacher Can Teach ... Anyone!</i> by W. Nikola-Lisa). After the read-aloud, lead a discussion with students allowing them to identify how these skills relate to both the classroom and workplace.
<b>2</b>	When focusing on understanding characters, students choose an individually or group-read text that includes characters that represent various careers (such as <i>Community Helpers from A to Z</i> by Bobbie Kalman). Students assume the role of a chosen character. Students may choose to dress like the individual, include character-specific props or make character puppets.
<b>3</b>	Invite your school's technology director or another technology professional from the community to discuss how integrating technology into a presentation strengthens and supports the speaker's message, rather than being a tool used for delivering the message. Then, students create a presentation that shares their personal strengths and interests, while demonstrating their skills for integrating technology and writing, speaking and listening.
Grade	MATHEMATICS
<b>K</b>	Provide students with real-world examples that demonstrate the use of shapes in various work places, such as circle wheels on a car, rectangle door on a house and triangle suspensions on a bridge. Students identify the shapes within the context. Then, lead a discussion of careers related to the examples, such as architects, designers and engineers.
<b>1</b>	Students use nonstandard tools such as pencils, paper clips and blocks, to estimate and measure objects. Lead a discussion of things people measure in different careers, such as carpenters measure boards and nurses measure how tall someone is.
<b>2</b>	Students use play money to solve real-world word problems. Arrange for students to interview a professional who counts money and uses math in their work, such as a bank teller, loan officer or investment banker.
<b>3</b>	Select a text for a shared reading that features how fractions are used in many parts of life (such as <i>If You Were a Fraction</i> by Trisha Speed Shaskan). Lead a discussion that emphasizes the importance of fractions in everyday experiences and the workplace, such as cooking and building. Allow students to share their ideas reflected in the text and identify examples of how fractions are used.

Grade	SCIENCE
K	<p><b>Earth Science</b> Students maintain a class weather chart and record each day’s weather. As a class, students discuss types of careers that are related to weather or seasons (such as meteorologist, landscaper and farmers) and the role that weather plays in each career.</p>
1	<p><b>Life Science</b> Students design a zoo map that incorporates the climate and environmental characteristics of native habitats for each zoo animal. Identify careers that play a role in the process, such as zoologist, animal care takers, veterinarians, maintenance workers, botanists, landscape architect or designer. Lead a discussion to assist students by asking them probing questions, such as, “What would a zoologist think about your design?” “Would an architect agree with your design?” “Is the design easy and safe for animal caretakers?”</p>
2	<p><b>Physical Science</b> Lead a discussion around the types of careers that design vehicles, or devices that respond to or are impacted by force, such as airplanes, boats and trucks. Students explore a career related to various types of transportation through available resources in the school or classroom library. Students explain what individuals in this field must know about force through drawing and/or writing.</p>
3	<p><b>Earth &amp; Space Science</b> Students explore the concept of “green jobs” by identifying careers, organizations and policies that reflect the conservation of energy or utilization of alternative energy sources. They may focus on aspects of green jobs such as wind, solar or wave energy, renewable materials, transportation or buildings, and structures that conserve energy. Additional information about green jobs is available at: <a href="http://www.bls.gov/green/">http://www.bls.gov/green/</a>.</p>
Grade	SOCIAL STUDIES
K	<p>Organize the classroom to represent the larger community with various career-based learning centers, such as: reading center for communication careers, toy animals for agriculture, a kitchen for hospitality and tourism, dress-up or textiles for retail, or toy cars for transportation. Students use role play and/or drawing to describe the responsibilities of those in respective career fields. Lead a discussion with students where they will identify the careers they experienced.</p>
1	<p>Students conduct a workplace visit to their school cafeteria where they will explore the location where lunch is consumed. Discuss related careers that are involved in the many aspects of consumption, such as agriculture, farmers, logistics, shipping and receiving companies, transportation, truck drivers and delivery drivers, business and marketing, and retail sales.</p>
2	<p>Host a career speaker to discuss how they earn money in their job. Include a selection of careers that represent varied career fields and workplaces and levels of education and training. To prepare, lead a discussion with students to create a list of questions to ask the career speakers, such as: what do you do on a typical day; how much money could someone expect to make starting out; do you need a certificate or license; and what education and training is required. Following the career speakers, allow students to reflect upon the information and share their interests related to the different careers.</p>
3	<p>Students explore how governments in diverse world communities maintain order, keep people safe and make and enforce rules and laws, then compare that to their local government. Students research or interview an individual in a career related to government, law and public safety to learn about local laws.</p>

# CAREER CONNECTIONS

## INTERMEDIATE CAREER CONNECTIONS

GRADE	ENGLISH LANGUAGE ARTS
4	Using the Frayer Model, students determine and clarify the meaning of unknown terms related to career readiness and provide characteristics, examples and non-examples of each term within the organizer. Conduct a class discussion guiding students through examples of characteristics of career readiness, such as The <a href="#">Career Ready Practices</a> and <a href="#">Kentucky Academic Standards for Career Studies</a> , Page 21.
5	In small groups, students discuss traditional and non-traditional careers. Non-traditional careers for women would be engineer; traditional for women would be a nurse. Non-traditional for men would be an early childhood educator; traditional for men would be a construction manager. Students research these careers and create multimedia presentations supported by facts and details that either inform or argue for a non-traditional career.
Grade	MATHEMATICS
4	Students use yard and meter sticks and rulers with inches and centimeters to solve problems with different units. Host a speaker, either virtually or in person, to discuss how measurement and various units are used across their career field, such as construction, carpentry or design. Lead a discussion that allows students to reflect on their work with different units and how it applies to the careers shared in the speaker's presentation.
5	Students use yard sticks and rulers to make conversions among inches, feet and yards for measurement. Provide students with real-world examples of how this skill is applied, such as: football field as an example of how yards are used, doorway height for feet and inseam of pants for inches. Discuss related careers, such as agriculture, design and construction.
Grade	SCIENCE
4	<b>Life Science</b> Students choose a recent disaster to explore (such as hurricane, earthquake, oil spill or tsunami) and identify the immediate and long-term consequences, including the interactions and relationships among the Earth's surface, ecosystem and plant and animal populations. Through exploring the impact, students address the types of careers involved in addressing the issues. This may include occupations responsible for tasks such as relocating organisms, rebuilding habitats or rescuing or rehabilitating organisms.
5	<b>Life Science</b> When examining factors that impact white-tailed deer population in Kentucky, students determine the implications for a community when the population decreases or increases. After students determine the implications for a community, they identify careers (such as wildlife biologist, game warden or conservation officer) directly or indirectly impacted in addressing the issues. This conversation will offer an opportunity to discuss how ecosystems can impact an economy. Environmental circumstances dictate demands and influence the necessity of certain careers.
6	<b>Earth and Space Science</b> Explore the uses of mineral properties across various careers, such as construction and sand paper, and acidic soil and landscaping or agriculture. Lead a discussion where you will assist students with identifying the careers and roles involved in such a process, such as:

	<ul style="list-style-type: none"> <li>• <u>Geologist</u>: People who study rocks, minerals and composition</li> <li>• <u>Machine operator</u>: The person who operates equipment</li> <li>• <u>Site manager</u>: Oversees each role and responsibility on the job site</li> <li>• <u>Environmentalists</u>: Concerned with the environmental impact of projects</li> <li>• <u>Engineer</u>: Understand and design the process, which includes the types of materials used</li> </ul> <p>Host a speaker who represents one of the roles involved in the process. The speaker can share their responsibilities and how they interact with others to complete a project.</p>
<b>Grade</b>	<b>SOCIAL STUDIES</b>
<b>4</b>	Students role-play that they are coordinating a fundraiser and need to buy the resources needed to make cookies. Students assume career-based roles (such as purchasing, advertising, budgeting, baking and logistics) while addressing aspects of entrepreneurship and production. Then, lead a discussion with students addressing the relationship among these skills to the classroom and the workplace.
<b>5</b>	Introduce students to Kentucky’s 16 Career Clusters. Explain that this is a framework to organize all careers. Ask students to identify a career for each cluster. Lead a class discussion highlighting how jobs and roles have changed over time.

SAMPLE

# CAREER CONNECTIONS

## MIDDLE GRADES CAREER CONNECTIONS

GRADE	ENGLISH LANGUAGE ARTS
6	<p>Students research a specific occupation within a selected career cluster. Using various resources (such as print, electronic, video and professional interview), students focus on research questions identified ahead of time, such as:</p> <ul style="list-style-type: none"> <li>• What is the future job outlook for your community and state? <a href="https://kystats.ky.gov/">https://kystats.ky.gov/</a></li> <li>• How much would you expect to be paid starting out?</li> <li>• What are the education and training requirements?</li> <li>• What types of classes or activities could you get involved in throughout middle and high school to prepare for this occupation?</li> <li>• What types of skills are needed? What types of technology are used?</li> <li>• What are the typical working conditions? What are some common tasks?</li> <li>• What pathways and related occupations are available within the same career cluster?</li> <li>• How do this career cluster, pathway and occupation align with your interests, skills, abilities and future goals?</li> </ul> <p>Students present a summary of their research to the class while dressed according to their workplace, such as suit, uniform or business casual.</p>
7	<p>Students select an instruction, technical or safety manual that represents a career field of interest selected by the teacher, student or is available on the internet. Lead a class discussion where students have a chance to brainstorm which types of careers they think might be associated with the manual, answering questions like:</p> <ul style="list-style-type: none"> <li>• Who wrote or created it?</li> <li>• What is the purpose?</li> <li>• Who is the intended audience?</li> <li>• How does this differ from other genres, such as structure, tone, vocabulary, images or diagrams?</li> </ul>
8	<p>Students brainstorm and then research the characteristics and <a href="#">Essential Skills</a> (Page 21) of a quality employee. For their pre-writing activity, students choose three to five of these ideas to focus their key idea statements, which will serve as the structure of their essay. Invite a business manager, supervisor or human resources professional to the classroom to share their expectations of quality applicants.</p>
Grade	MATHEMATICS
6	<p>Students role play as a small business owner who sells items by posting them on a website. They need to ship a “mystery item,” such as egg, single potato chip or shoes. Provide students with the characteristics of the “mystery item” that must be packaged and shipped (such as perishable, breakable, sharp edges, liquid, flammable and approximate dimensions). Students design a package to accommodate the “mystery item,” identifying the surface area and volume. Lead a discussion, or host a career speaker, to relate this skill to various career fields that require critical thinking, problem-solving, and mathematic calculations (such as logistics, transportation and health).</p>

<b>7</b>	Students use data available from Census at School ( <a href="http://www.amstat.org/censusatschool">http://www.amstat.org/censusatschool</a> ) to draw inferences about the population of students in Kentucky from the sample provided. Students use the data to determine the measurements for a long-sleeve shirt, identifying the arm span for a small, medium, large and extra-large (box plotting, where each quartile is a size). To see how this skill is applied across various workplaces, students choose a career to research (such as marketing, logistics and finance) and identify where drawing inferences is part of the typical duties.
<b>8</b>	Students use the Pythagorean theorem for constructing a design and proving the measurements. They will construct a real-world design (such as landscaping or garden, building floor plan or scaled map) and use a Pythagorean triplet (such as 3-4-5, 6-8-10, 7-24-25) to prove their measurements and plan their project. Coordinate a hands-on project (such as a community garden, school map or classroom model) where students apply this skill and identify the application among careers, such as agriculture, engineering and design.
<b>Grade</b>	<b>SCIENCE</b>
<b>7</b>	<b>Earth and Space Science</b> Students research or investigate an actual environmental event (such as a specific release of a toxin or contaminant) and determine how it impacted each of Earth's spheres. Students identify a body of water that has been flagged as an environmental hazard. They will identify careers needed to assist in analyzing the problem, developing a solution and acting to resolve the issue. Students identify which organizations and agencies to consult, how they will mobilize the necessary resources and their specific role in the project.
<b>8</b>	<b>Life Sciences</b> Students investigate the role of DNA in a chosen career cluster such as genetics or birth defects in health sciences; managing the health and wellness of animals or genetically modified foods in agriculture; or crime scene analysis in law and public safety.
<b>Grade</b>	<b>SOCIAL STUDIES</b>
<b>6</b>	Students choose a product that is both locally produced and imported. They will compare the price of each product and identify factors that impact the price and availability of the product. Students investigate the impact on the local economy of buying a locally produced product versus one that is imported, focusing on demands, outlook and availability of careers needed to create the product (such as manufacturing, transportation and logistics).
<b>7</b>	Students analyze how one or more of the four factors of production (land, labor, capital and entrepreneurship) plays a role in the choice of goods produced or services delivered within a career cluster of their choice.
<b>8</b>	Students explore careers that utilize maps as an important part of their work, such as transportation, architecture, engineering and public administration. Students identify various types of maps, addressing questions that represent the various roles involved throughout the process such as: <ul style="list-style-type: none"> <li>• Who created it?</li> <li>• What is the purpose?</li> <li>• Who will use it and how?</li> </ul> Students develop questions about these careers that will guide their research – addressing topics and information they would like to know more about (KWL). Next, students research careers and identify pathways across career fields that address their questions related to maps.

# CAREER CONNECTIONS PLANNING ORGANIZER

## CONTENT

What standard, content or skill in this unit?

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## REAL WORLD CONNECTION

How is the content or skill used in the real world?

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How can I connect this content to a real-world task?

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## CAREER CONNECTIONS

What career or career cluster uses this content or skill?

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How can I investigate connected careers or career clusters?

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Are there community partners who can share their expertise?

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# CONVERSATION STARTERS

**Content Area, Standard or Topic:**

**What Career Clusters or Career Pathways use this information or skill to solve problems or complete tasks?**

**What are the typical job-related tasks?**

Choose a career within one of the clusters or pathways. \_\_\_\_\_  
Visit [Career One Stop](#) to learn more about the daily work of these individuals. Record your findings here.

**What is the working environment for this career?**

- Where do these individuals work?
- What are the typical working hours?
- Is the daily routine fixed, frequently changing or flexible?
- Is this a stressful or demanding job? Explain your answer.
- Do individuals in this career work alone, as part of a team, with the public, etc.?

**What post-secondary education do you need to prepare for this career?**

# CAREER CONNECTIONS GRID ORGANIZER

## WHAT ARE CAREER CONNECTIONS?

Career connections include the knowledge, skills or tasks related to a career cluster, career pathway or an individual career.

## DESCRIPTION & PURPOSE

The Career Connections Grid Organizer is a tool to help teachers and students identify real-world connections to the general education content. Making these explicit connections serve to help students discover their personal interests, skills and aptitudes and support development of their Individual Learning Plan (ILP).

## USE

### PLANNING

Teachers may use this organizer as a planning tool to prompt connections to their content. It may be modified as needed to meet instructional needs.

### WHERE TO USE

This tool may be used by students:

- within a unit of study
- throughout the span of a course
- across content areas

### HOW TO USE

- Enlarge, post in the classroom and add connections throughout the span of a course.
- Ask students, individually or with a partner, to identify connections to as many careers as possible after a unit of study.
- Divide clusters among students to individually research connections to a career cluster and share with the whole class.
- Use as a BINGO grid to see who can identify 4 connections in a row.
- Ask students to reflect on their interest in the identified connections and/or career clusters using a 5-Star rating system. Students draw the stars in each grid that contains a connection.
- Include these connections in a career portfolio or as part of their ILP.

# CAREER CONNECTIONS GRID ORGANIZER

Content Area, Standard or Topic:

<b>AGRICULTURE, FOOD &amp; NATURAL RESOURCES</b>	<b>ARCHITECTURE &amp; CONSTRUCTION</b>	<b>ARTS, A/V TECHNOLOGY &amp; COMMUNICATIONS</b>	<b>BUSINESS MANAGEMENT &amp; ADMINISTRATION</b>
<b>EDUCATION &amp; TRAINING</b>	<b>FINANCE</b>	<b>GOVERNMENT &amp; PUBLIC ADMINISTRATION</b>	<b>HEALTH SCIENCE</b>
<b>HOSPITALITY &amp; TOURISM</b>	<b>HUMAN SERVICES</b>	<b>INFORMATION TECHNOLOGY</b>	<b>LAW, PUBLIC SAFETY, CORRECTIONS &amp; SECURITY</b>
<b>MANUFACTURING</b>	<b>MARKETING</b>	<b>STEM</b>	<b>TRANSPORTATION, DISTRIBUTION &amp; LOGISTICS</b>

## K-3 STUDENT REFLECTION

**Directions:** Draw a picture of someone working. Use the lines below to describe what they are doing.



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## STUDENT REFLECTION

**Directions:** Go to [bit.ly/kyexplore](http://bit.ly/kyexplore).

Choose a career from one of the 16 clusters: \_\_\_\_\_

Watch the video for this career to determine the knowledge, skills and working conditions that are common in this careers.

KNOWLEDGE	Specific to this career.	Are these a good fit for me?
<ul style="list-style-type: none"> <li>• <i>Content or topics specific to this career</i></li> </ul>		<input type="checkbox"/> Yes <input type="checkbox"/> Maybe <input type="checkbox"/> No
SKILLS/TASKS	Specific to this career.	Are these a good fit for me?
<ul style="list-style-type: none"> <li>• <i>Skills and/or tasks required in this career</i></li> </ul>		<input type="checkbox"/> Yes <input type="checkbox"/> Maybe <input type="checkbox"/> No
WORKING CONDITIONS	Specific to this career.	Are these a good fit for me?
<ul style="list-style-type: none"> <li>• <i>Location</i></li> <li>• <i>Working hours</i></li> <li>• <i>Tasks – routine, frequently changing, flexible</i></li> <li>• <i>Low or high stress</i></li> <li>• <i>Work alone, as part of a team, with the public, etc.</i></li> </ul>		<input type="checkbox"/> Yes <input type="checkbox"/> Maybe <input type="checkbox"/> No
EDUCATIONAL REQUIREMENTS	Specific to this career.	Are these a good fit for me?
<ul style="list-style-type: none"> <li>• <i>High school diploma</i></li> <li>• <i>On-the-job training</i></li> <li>• <i>Community or technical college</i> <ul style="list-style-type: none"> <li>○ <i>Industry certificate or license</i></li> <li>○ <i>Associate’s degree</i></li> </ul> </li> <li>• <i>College or university</i> <ul style="list-style-type: none"> <li>○ <i>Bachelor’s degree</i></li> <li>○ <i>Master’s degree</i></li> <li>○ <i>Doctoral degree</i></li> </ul> </li> <li>• <i>Registered apprenticeship</i> <ul style="list-style-type: none"> <li>○ <i>Apprentice</i></li> <li>○ <i>Journeyman</i></li> <li>○ <i>Masters</i></li> </ul> </li> </ul>		<input type="checkbox"/> Yes <input type="checkbox"/> Maybe <input type="checkbox"/> No